WatchBP®
Microlife WatchBP AG Switzerland, Espenstrasse 139, 9443 Widnau, Switzerland
Tel +41 71 727 7000 Fax +47 71 727 7001 www.watchbp.com

WatchBP Analyzer 03

User Manual

microlife®

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Microlife WatchBP AG Switzerland, Espenstrasse 139, 9443 Widnau, Switzerland
Tel +41 71 727 7000 Fax +47 71 727 7001 www.watchbp.com

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1 Install WatchBP Analyzer 03

Before Start

Please uninstall any previous version of WatchBP Analyzer 03 software residing in the computer.

Remove previous program

There are two ways to remove the previous installation.

（1） Remove from Control Panel.

Windows XP:

Step 1: Click **<Start>**/**<Settings>**, then select Control Panel.

Step 2: In the Control Panel window, double click **<Add>**/**<Remove>** programs icon.

Step 3: Find out the item WatchBP 03 software x.x.x.x then remove it.

Windows Vista:

Step 1: Click **<Start>**/**<All programs>**, then select **<Microlife WatchBP Analyzer 03>** folder.

Step 2: Press **<Uninstall Microlife WatchBP Analyzer 03>** icon and the program will uninstall automatically.

（2）Remove from Setup program.

Step 1: Executing the Setup.exe program. If there is previous version in user's computer, user can select **<Remove>** option. The dialog shows up as seen below.

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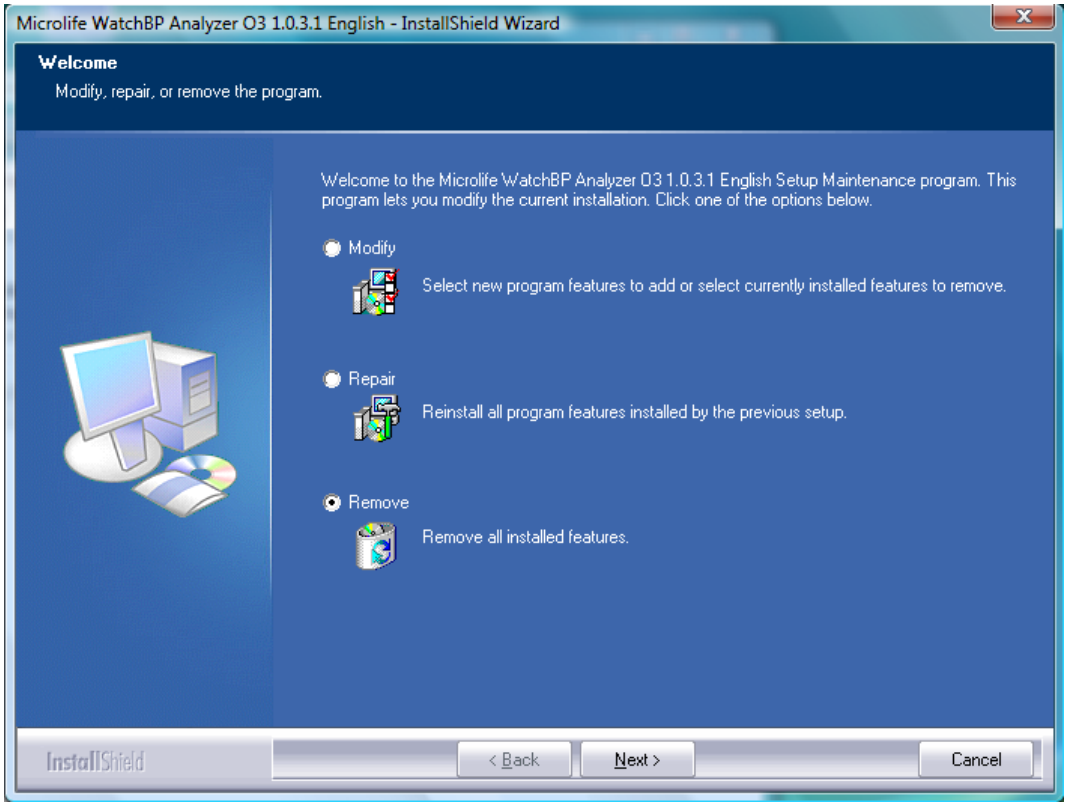
Microlife WatchBP Analyzer O3 1.0.3.1 English - InstallShield Wizard
Welcome
Modify, repair, or remove the program.
Welcome to the Microlife WatchBP Analyzer O3 1.0.3.1 English Setup Maintenance program. This program lets you modify the current installation. Click one of the options below.
Modify
Select new program features to add or select currently installed features to remove.
Repair
Reinstall all program features installed by the previous setup.
Remove
Remove all installed features.
InstallShield
< Back
Next >
Cancel

Fig 1

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Step 2: Select **<Remove>** and press **<Next>** button, the setup dialog will show below.

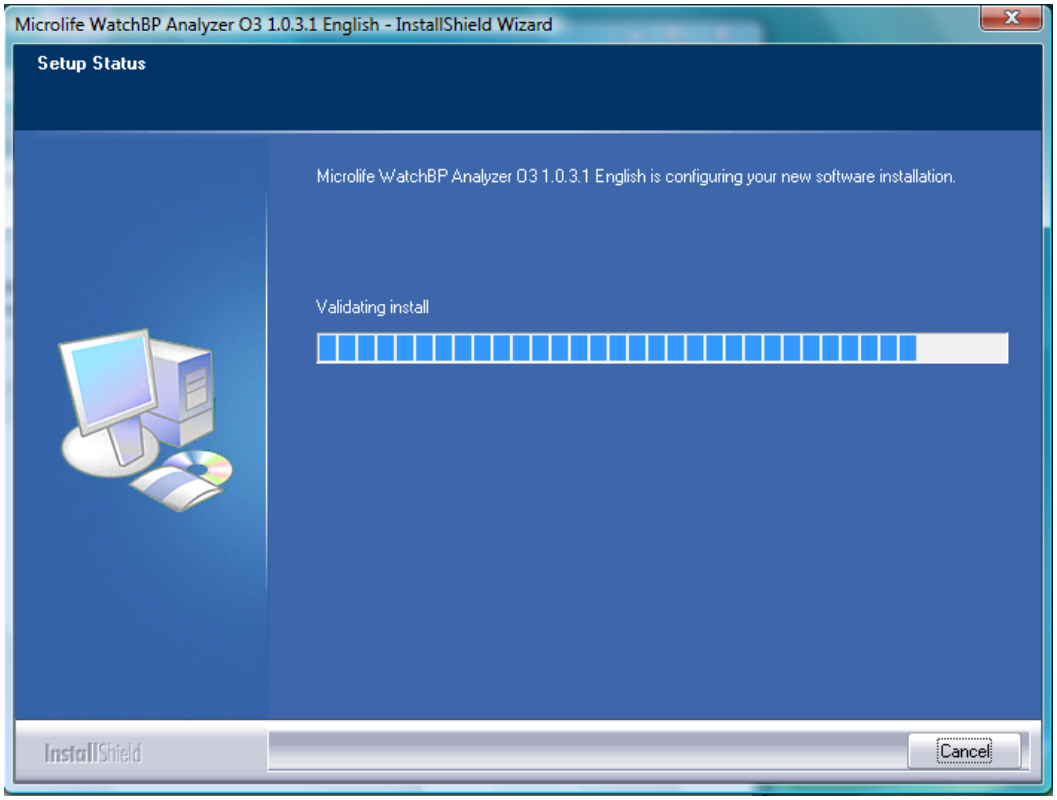
Microlife WatchBP Analyzer O3 1.0.3.1 English - InstallShield Wizard
Setup Status
Microlife WatchBP Analyzer O3 1.0.3.1 English is configuring your new software installation.
Validating install
InstallShield
Cancel

Fig 2

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Step 3: When removal is finished, the dialog shows up as seen in Fig 3.

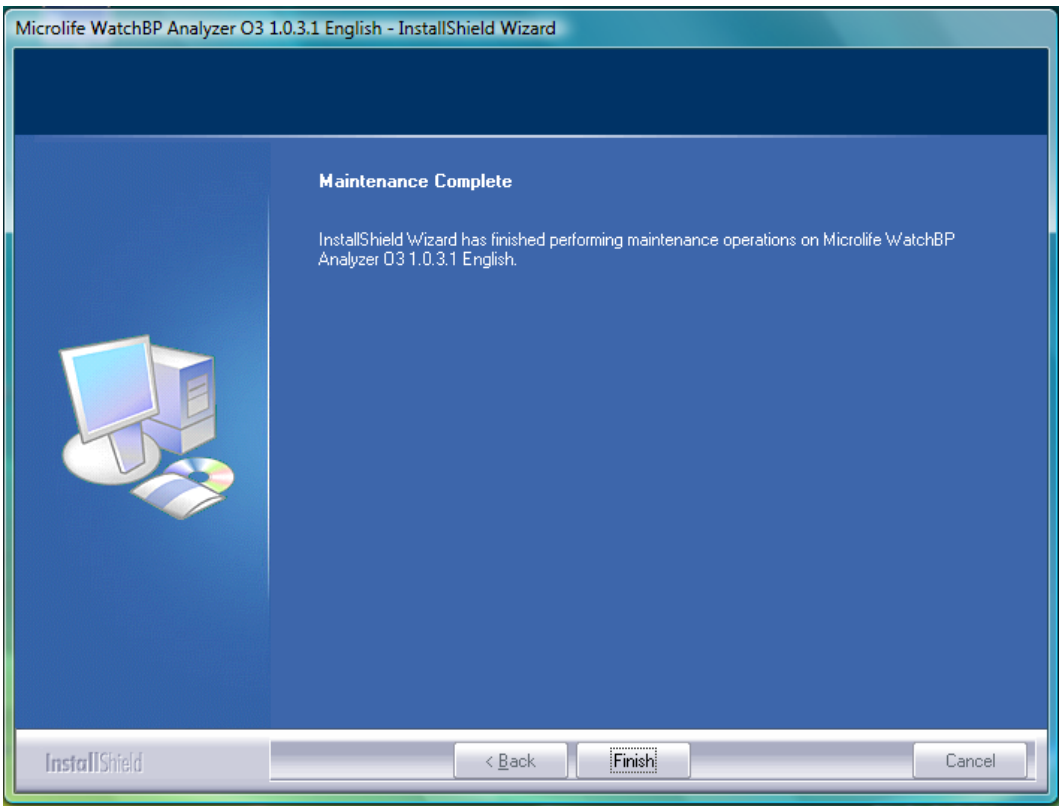
Microlife WatchBP Analyzer O3 1.0.3.1 English - InstallShield Wizard
Maintenance Complete
InstallShield Wizard has finished performing maintenance operations on Microlife WatchBP Analyzer O3 1.0.3.1 English.
InstallShield
< Back
Finish
Cancel

Fig 3

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Install WatchBP Analyzer 03

The following steps guide user to install the WatchBP Analyzer 03 software.

Step 1:

Put CD into CD drive, an auto-install program will guide user to complete the installation step by step. User also can find **setup.exe** from the given CD, double click on it, the installation wizard will take some time to check user's operating system version and configure the installer as seen in Fig-4. Then the welcome dialog box will show up as seen in Fig-5, then click **<Next>**.

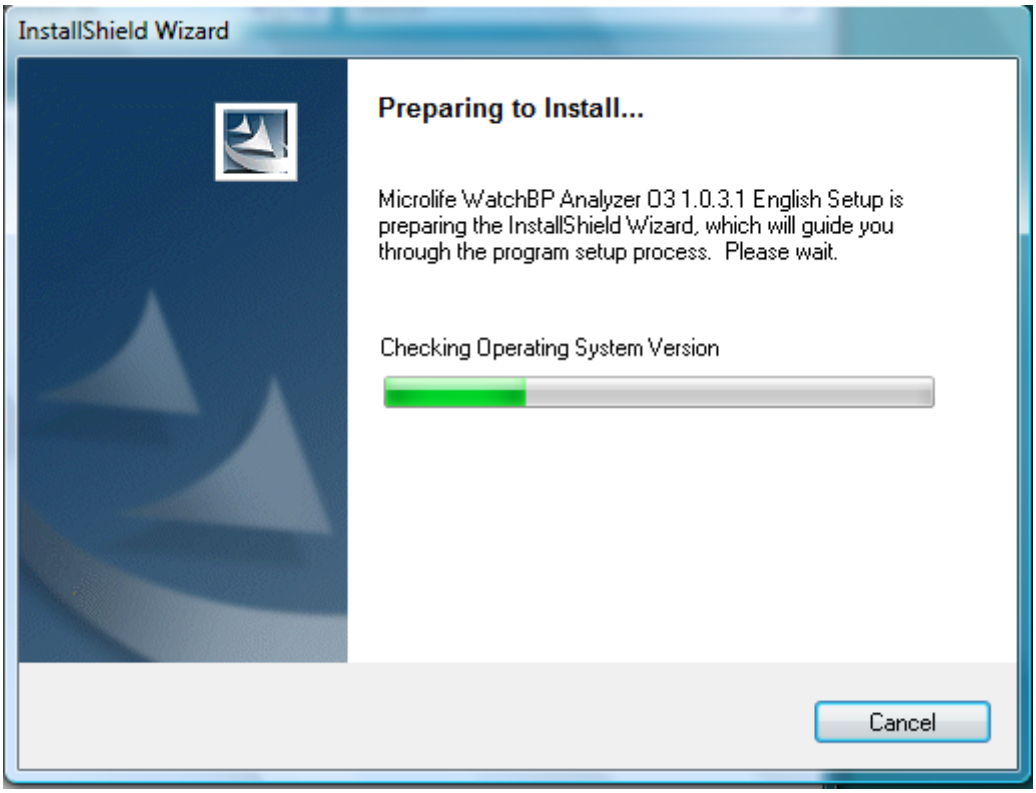
InstallShield Wizard
Preparing to Install...
Microlife WatchBP Analyzer 03 1.0.3.1 English Setup is preparing the InstallShield Wizard, which will guide you through the program setup process. Please wait.
Checking Operating System Version
Cancel

Fig 4

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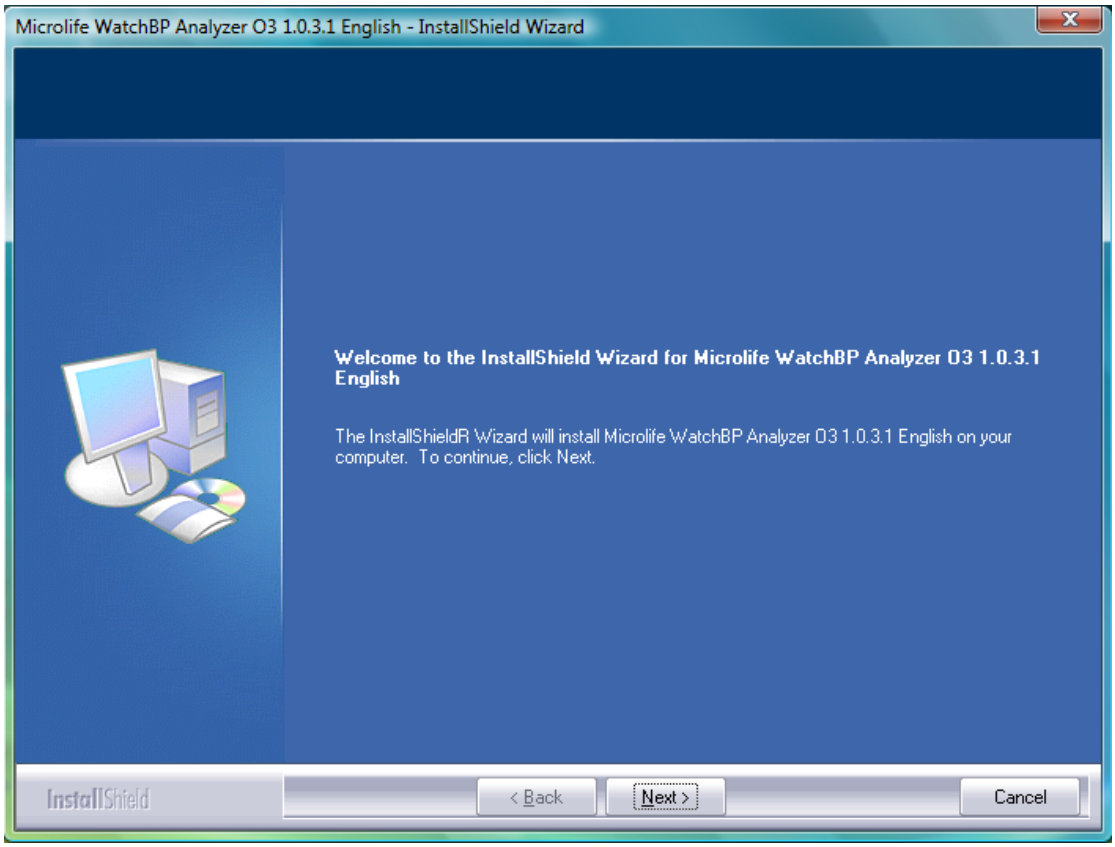
Microlife WatchBP Analyzer O3 1.0.3.1 English - InstallShield Wizard
Welcome to the InstallShield Wizard for Microlife WatchBP Analyzer O3 1.0.3.1 English
The InstallShieldR Wizard will install Microlife WatchBP Analyzer O3 1.0.3.1 English on your computer. To continue, click Next.
InstallShield
< Back
Next >
Cancel

Fig 5

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Step 2:

After clicking **<Next>**, the installation will proceed automatically. When setup finished, the dialog will show up as seen in Fig-6.

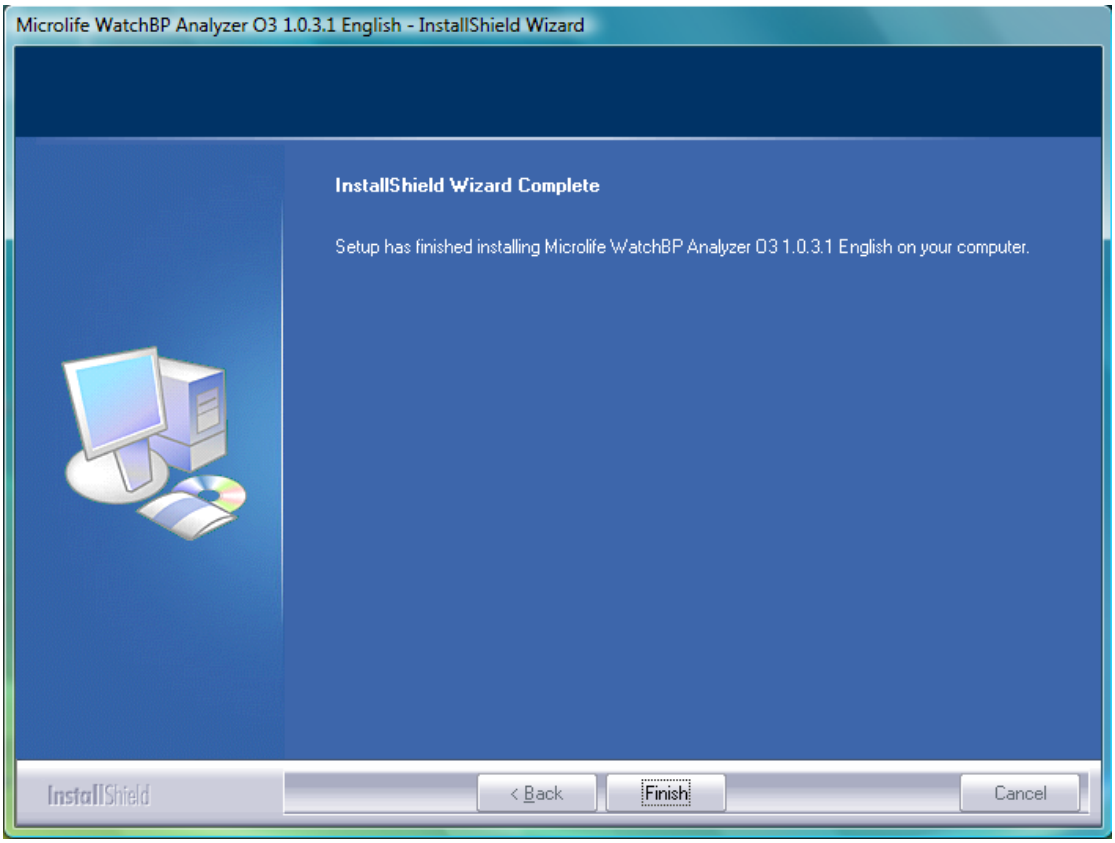
Microlife WatchBP Analyzer O3 1.0.3.1 English - InstallShield Wizard
InstallShield Wizard Complete
Setup has finished installing Microlife WatchBP Analyzer O3 1.0.3.1 English on your computer.
InstallShield
< Back
Finish
Cancel

Fig 6

Step 3:

Windows XP:

After clicking **<Finish>**, the dialog shows up as seen in Fig- 7. User must connect WatchBP O3 device to user's pc. The program will make some configurations with O3 device. Then click **<OK>**.

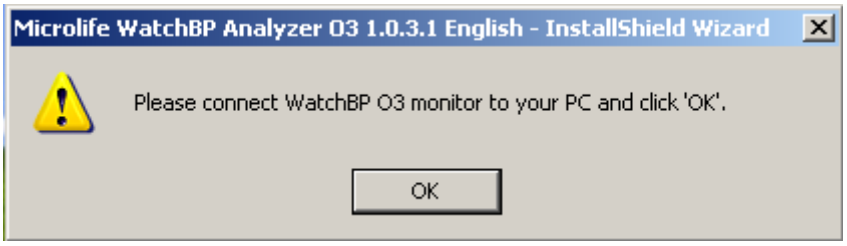
Microlife WatchBP Analyzer O3 1.0.3.1 English - InstallShield Wizard
Please connect WatchBP O3 monitor to your PC and click 'OK'.
OK

Fig 7

Windows Vista:

See step4.

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Step 4:

After successful installation, two options will be shown in the dialog box. The default and recommended action is to reboot the system.

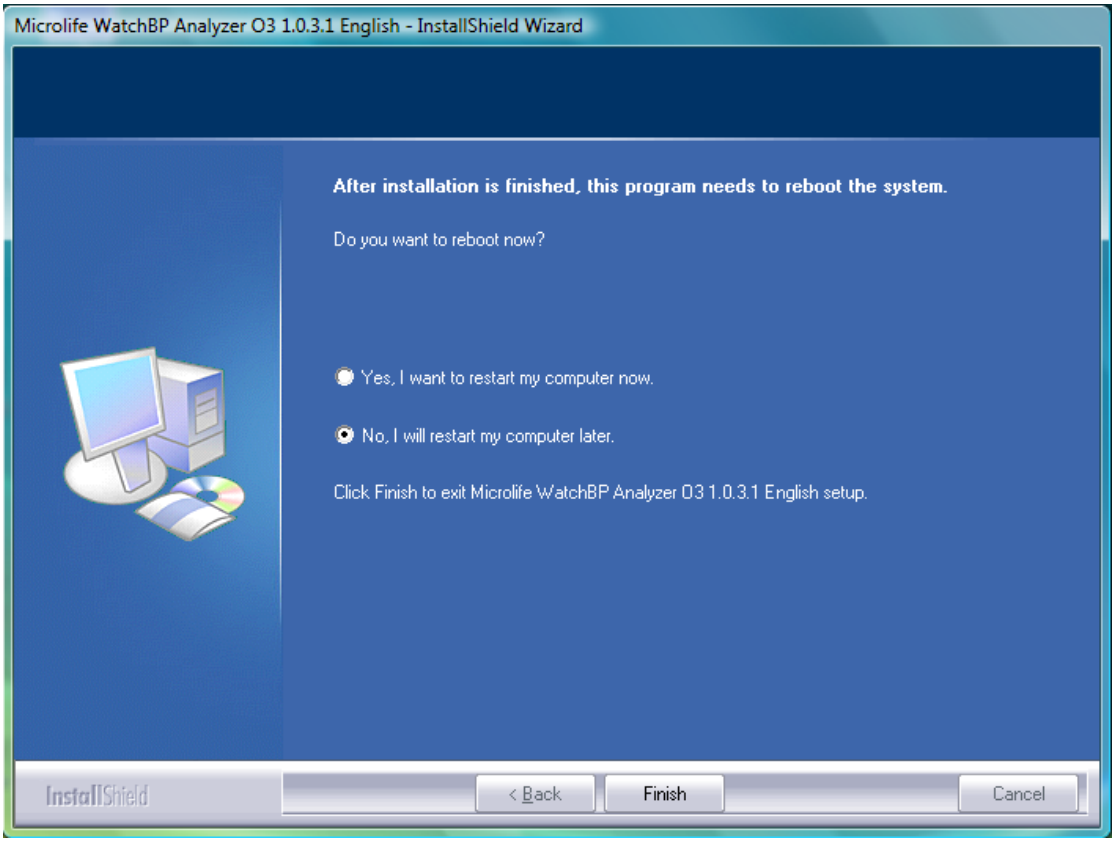
Microlife WatchBP Analyzer O3 1.0.3.1 English - InstallShield Wizard
After installation is finished, this program needs to reboot the system.
Do you want to reboot now?
Yes, I want to restart my computer now.
No, I will restart my computer later.
Click Finish to exit Microlife WatchBP Analyzer O3 1.0.3.1 English setup.
InstallShield
< Back
Finish
Cancel

Fig 8

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2 WatchBP Analyzer 03 User Interface

Below is the screen layout of WatchBP Analyzer 03 program.

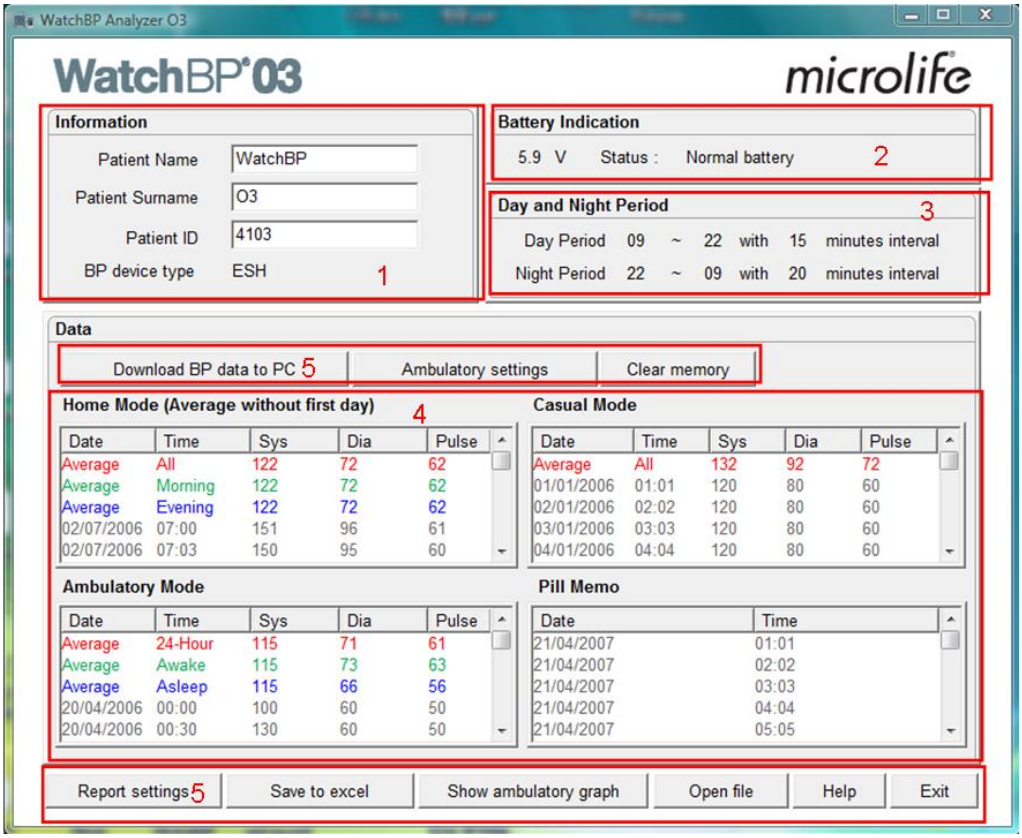

Fig 9

(1) Information area

The area displays patient's basic information and reminds user the Analyzer 03 is based on ESH (European Society Hypertension) Guideline.

<Configure patient information to the device>

If user wants to configure patient information and measurement schedule to the device, user has to input **Patient Name**, **Patient Surname** and **Patient ID.**

<Download patient information to PC>

When the connection is established successfully via USB cable, the patient id information of the 03 device will be displayed on the **Patient ID** field automatically.

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(2) Battery indication area

The area displays the voltage and status of battery. When the voltage is less than 5V, the status will display the **"Attention: Charge or renew battery"** message.

(3) Day and Night Period area

<Ambulatory Measurement Schedule of device>

When the connection is established successfully via USB cable, the measurement schedule will displayed at this area automatically. If there is no configuration of the device, the field is blank.

(4) BP data area

<Home mode>

This area displays the readings of home mode measurements. According to **<ESH>** guidelines, if the measurements are less than 12 times, the average can not be calculated.

<Casual mode>

This area displays the readings of casual mode measurements. The maximum number of measurements is 250.

<Ambulatory mode>

This area displays the readings of ambulatory mode measurements. The maximum number of measurements is 144.

<Pill Memo>

This area displays the time of taking medicine recorded by user. It can record at most 50 records.

(5) Buttons area

<Download BP data to PC> button

Press the button to download all readings of 03 device. It includes the readings of home mode, casual mode, ambulatory mode and pill memo.

<Ambulatory Settings> button

When user presses the button, the **< Ambulatory Settings >** dialog shows up. User can set **<Patient ID>**, **<Day and Night Period>**, **<Highest Inflation Pressure>** and

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<Ambulatory Option> at this area.

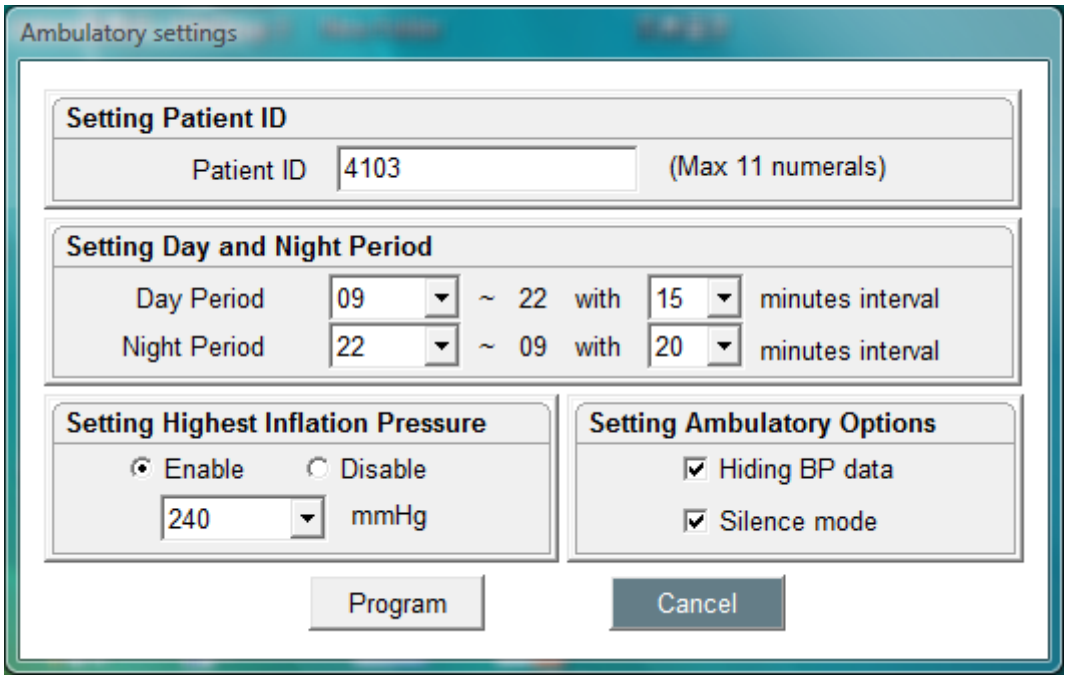

Fig 10

Setting Patient ID

User can set <Patient ID> at this box. There are two ways to program <Patient ID> to the device.

Method 1: Input <Patient ID> at section 1 of Fig 9. If user inputs data in <Patient ID> field of Fig 9, when user presses < Ambulatory Settings > button, the same value will be displayed at the <Patient ID> field of Fig 10. If the value doesn't match the user's requirement, user could modify it, and press <Program> button to program to BP device.

Method 2: User could input Patient ID at the field of Fig 10 directly. And then press <Program> button to program to BP device.

Setting Day and Night Period

User can set Day period, Night period and measurements interval here. The awake and asleep time is no limitation. The range is from 00:00 to 23:00 and the measurement interval includes 15, 20, 30 and 60 minutes.

Setting Highest Inflation Pressure:

User can configure the highest inflation pressure and program the configuration to

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the device.

Setting Ambulatory Option

User can choose to hide BP data of O3 device and mute during the measurement.

If user has set **Patient ID** and above configuration, then press the **<Program>** button to program the schedule to the WatchBP O3 device. It will delete the all data of BP mode of the memory and send the new **Patient ID** to the WatchBP O3 device.

<Clear memory> button:
Press the button to erase the all data of home mode, casual mode, ambulatory mode and pill memo of the WatchBP O3 device.

<Report settings> button:
User can press the button to configure Excel and PDF report of the Analyzer O3 program. The **< Report settings>** dialog shown as below.

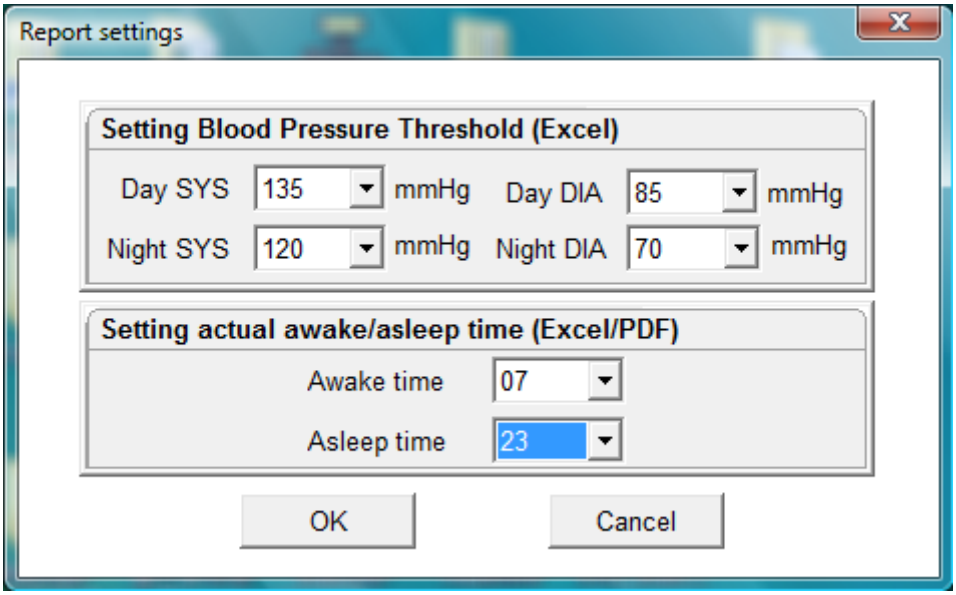

Fig 11

Setting Blood Pressure Threshold:

User can configure the normal limits differ from day and night.

Setting Actual Awake/ Asleep Time:

Physician can modify the awake and asleep time according to patient's real life. The awake time range is from 00:00 to 23:00, asleep time range is the same.

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<Save to excel> button:
To save the data of the patient into a excel file. There are **<Home mode>**, **<Casual mode>**, **<Ambulatory mode >** and **<Pill memo>** sheets in the excel file.

<Show ambulatory graph> button:
User presses the button to produce the ambulatory graph, it's shown as Fig- 12. The graph displays the first 24- hour of ambulatory mode data.
Note: The button will be disabled, if there is no ambulatory data in the device.

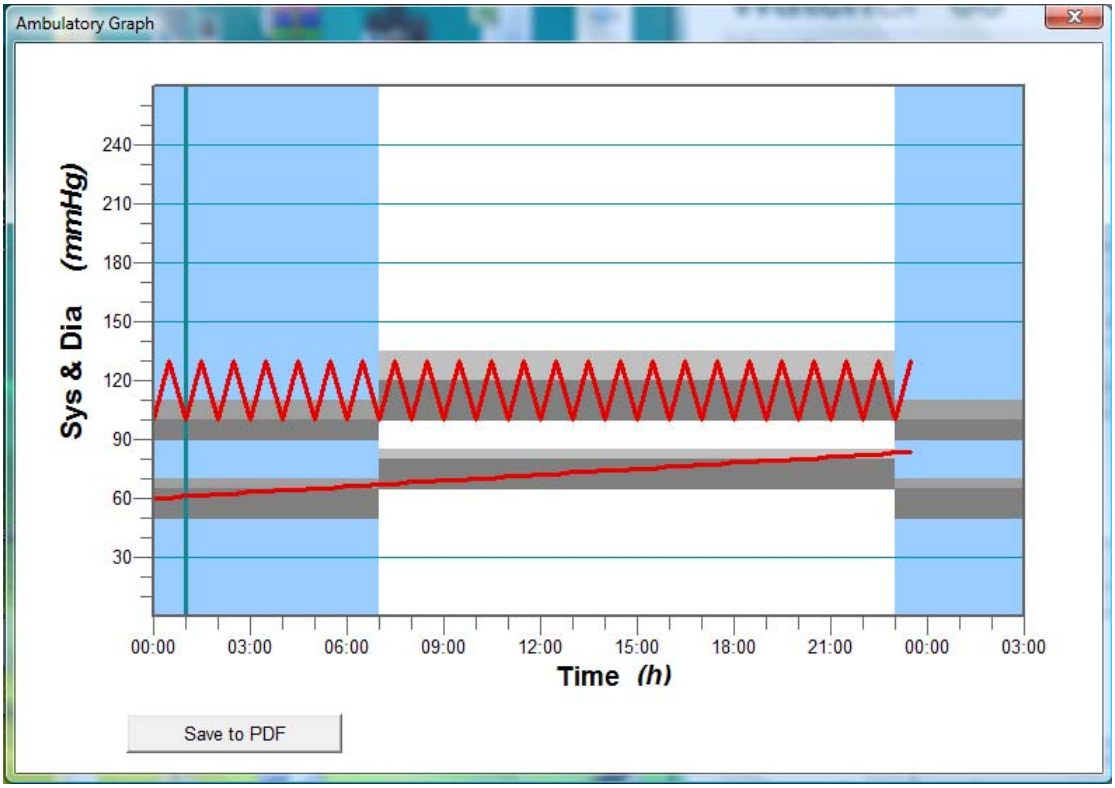

Fig 12

User can also press **<Save to PDF>** button to save the first 24- hr ambulatory data into PDF format. It will be described in the scenario2 of chapter 3.

Note: Only data of the first 24- hour could be saved and drawn on the graph of PDF report.

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<Open file> button:
Press the button to open saved excel or PDF file of patient.

<Help> button:
Press the **<Help>** button, the version dialog will show up first. Then user can press the **<User Manual>** button to open the manual.

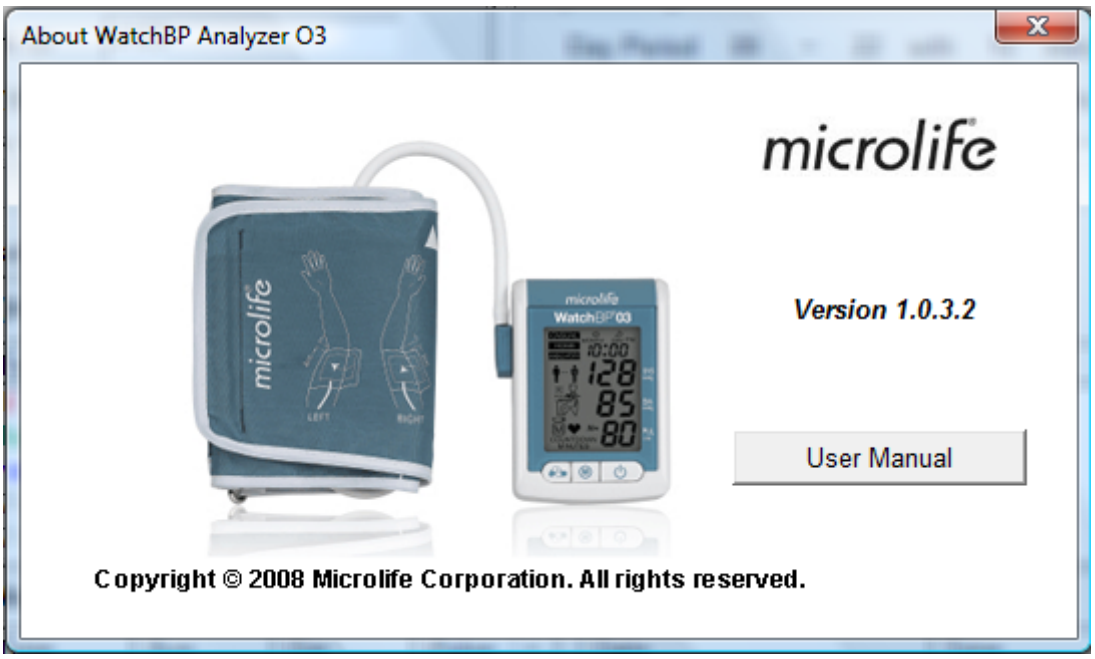

Fig 13

<Exit> button:
Exit the WatchBP Analyzer O3 program.

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3 Scenarios of WatchBP Analyzer 03

There are two scenarios to explain how to manipulate the WatchBP Analyzer 03 program. Scenario1: Configure ambulatory measurement schedule, device options and program to device. Scenario2: Download BP data to PC and save Excel/ PDF file.

Scenario 1: Configure ambulatory measurement schedule, device options and program to device

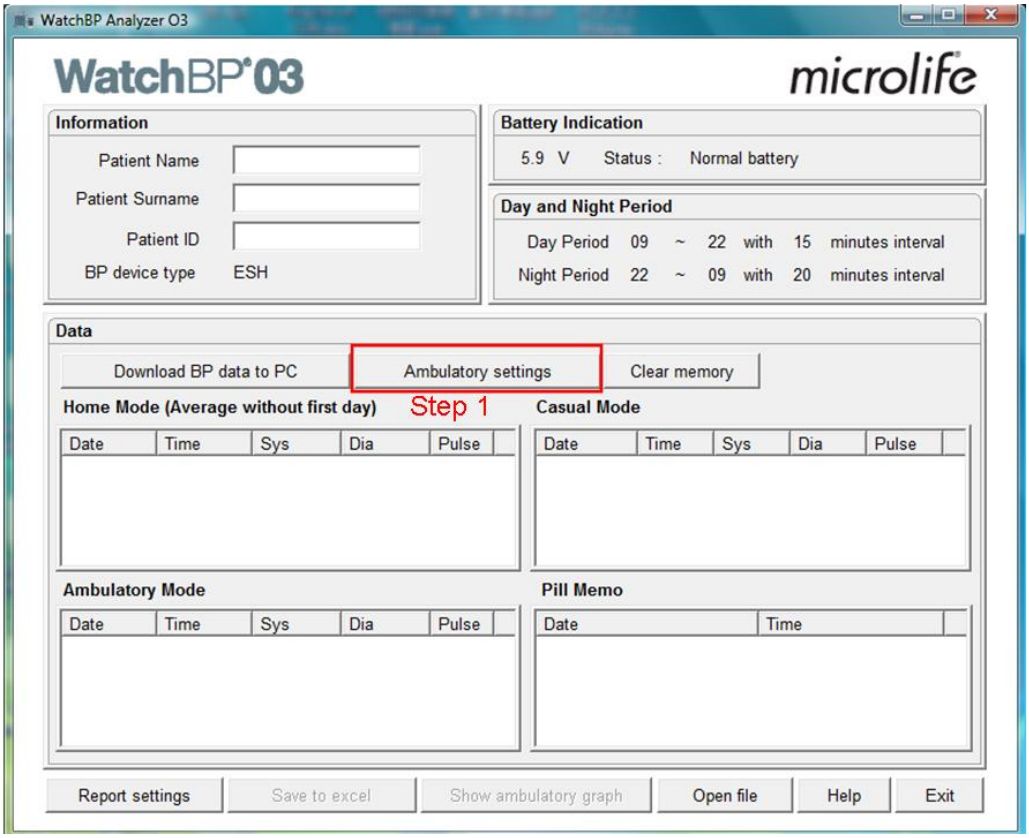

Fig 14

Step 1: Press **<Ambulatory Settings>** button to configure. And then the configuration dialog shows up as Fig 15.

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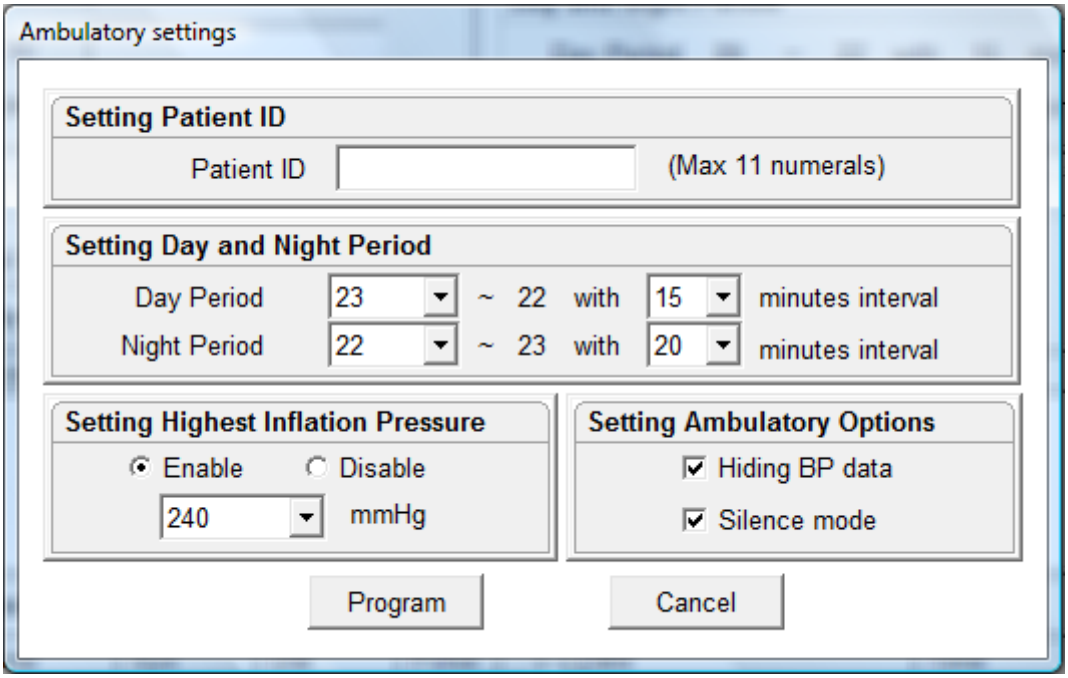

Fig 15

Step 2: Parameters configuration.

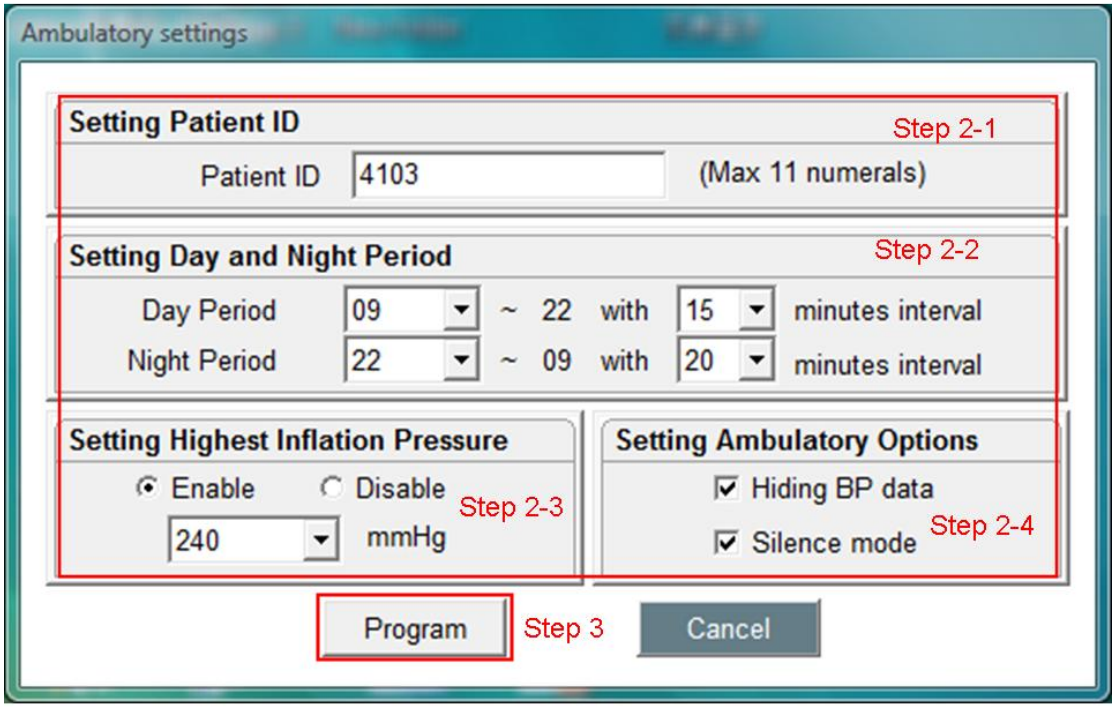

Fig 16

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Step 2-1: User inputs Patient ID.

Step 2-2: Configure ambulatory day and night measurement period. Take for example, set 06 ~ 23 with 15 minutes interval for awake time, 23~ 06 with 20 minutes interval for asleep time.

Step 2-3: Configure highest inflation pressure of device.

Step 2-4: Select **<Hiding BP data>** and **<Silence mode>** option.

Step 3: Press **<Program>** button to set configuration of device. It will clear all data of device memory. If it's successfully, the dialog will show up as below.

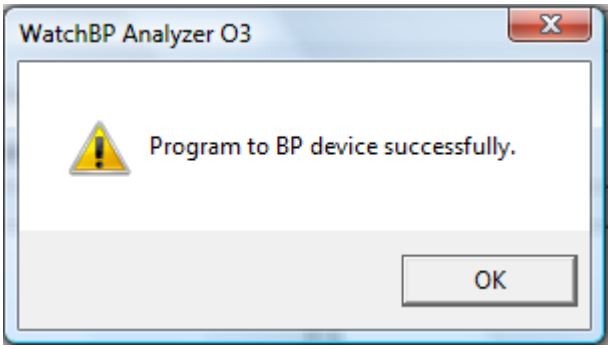

Fig 17

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Scenario 2: Download BP data to PC and save excel/ PDF file

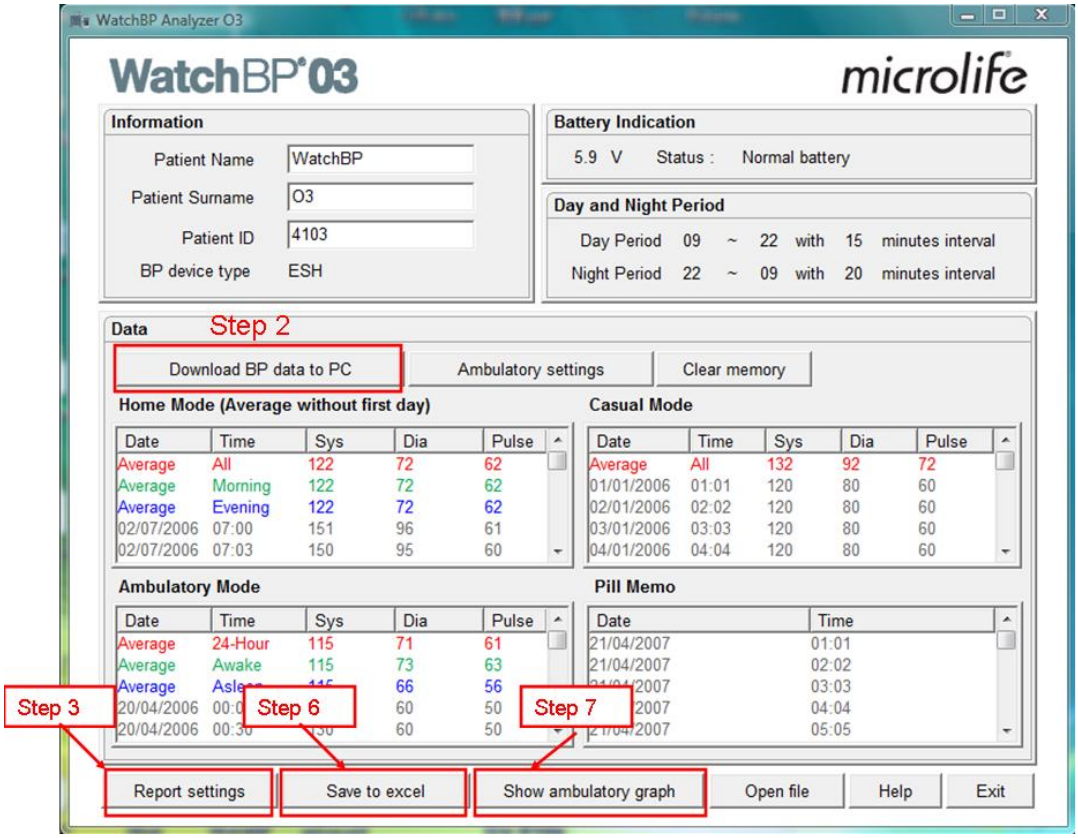

Fig 18

Step 1: Connect to the WatchBP O3 device. When device connected, WatchBP Analyzer O3 will import the patient id of the O3 device automatically.

Step 2: Press **<Download BP data to PC>** button to download BP data from O3 device. If data downloaded successfully, user can see the readings of **<Home Mode>, <Casual Mode>, <Ambulatory Mode>** and **<Pill Memo>.**

Step 3: Press **<Report settings>** button to configure **<Blood Pressure Threshold>** and **<Actual Awake/ Asleep time>**, the setting dialog will show up as Fig 19.

Step 4: Configure the **<Blood Pressure Threshold>**.

Step 5: It's assumed that the patient's actual awake time and asleep time is

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different with the configuration. User can modify the awake from and asleep from time at **<Setting Actual Awake/ Asleep Time >** area. Press **<OK>** button and back to the main frame (Fig 19).

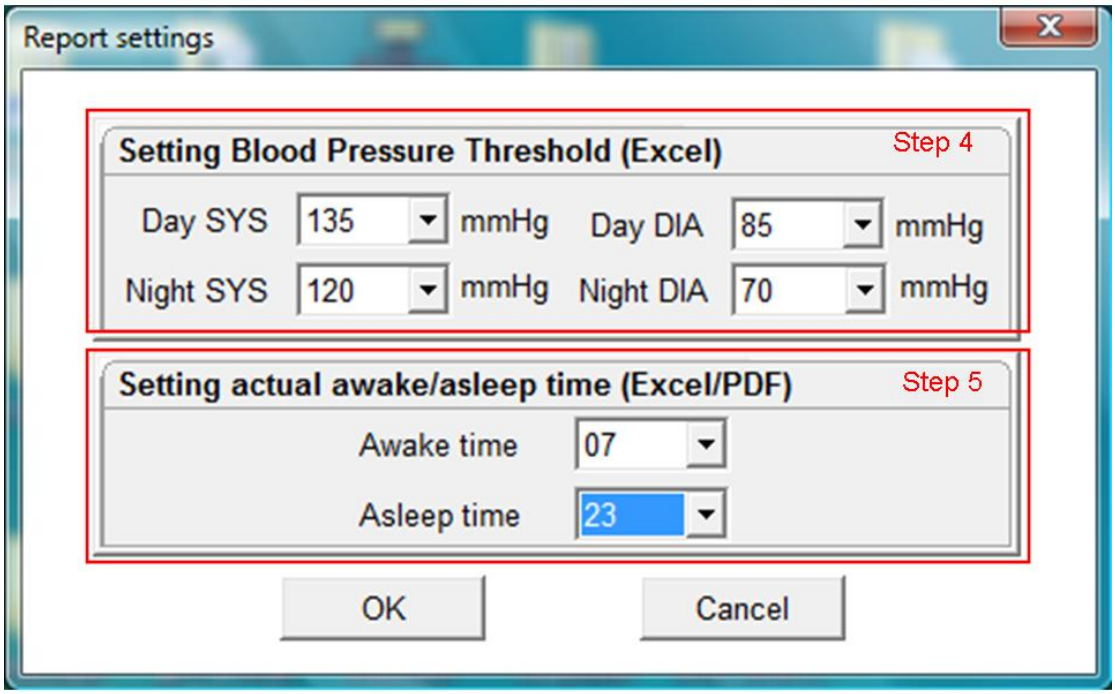

Fig 19

Step 6: Press **<Save to excel>** button to save data to the excel file. The file name is generated automatically which follow the automatic named algorithm (PatientID_WatchBP03_Date.xls). There are **<Home mode>**, **<Casual mode>**, **<Ambulatory mode>** and **<Pill memo>** sheets in the excel file. User can see the brief measured information and charts of ambulatory mode in **<Ambulatory mode>** sheet, seen as Fig- 20 & Fig- 21.

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Microlife WatchBP AG Switzerland, Espenstrasse 139, 9443 Widnau, Switzerland
Tel +41 71 727 7000 Fax +47 71 727 7001 www.watchbp.com

ABPM mode

Patient ID	4103	Study Date	2009/01/08
Patient Name	WatchBP	Surname	O3

Day and night period	Time	Interval
Day Period	09 ~ 22	15 min
Night Period	22 ~ 09	20 min

Day BP load (% of day readings > 135/85 mmHg)
Night BP load(% of night readings > 120/70 mmHg)

Awake	0.0%
Asleep	12.5%

Overall successful readings

Successful Readings	96.5%

Dip

24-hour Sys	0.0%
24-hour Dia	12.0%

Average (Standard deviation)

	Actual Awake / Asleep	Sys (SD)	Dia (SD)	Pulse (SD)	Valid readings
24-hour	09 ~ 09	115 (1)	72 (7)	62 (7)	139
Awake	07 ~ 23	115 (1)	75 (5)	65 (5)	93
Asleep	23 ~ 07	115 (0)	66 (7)	56 (7)	46

Date	Time	Sys	Dia	Pulse	Remark
20/04/2006	00:00	100	60	50	
20/04/2006	00:30	130	60	50	
20/04/2006	01:00	100	61	51	
20/04/2006	01:30	130	61	51	
20/04/2006	02:00	100	62	52	
20/04/2006	02:30	130	62	52	

Fig 20

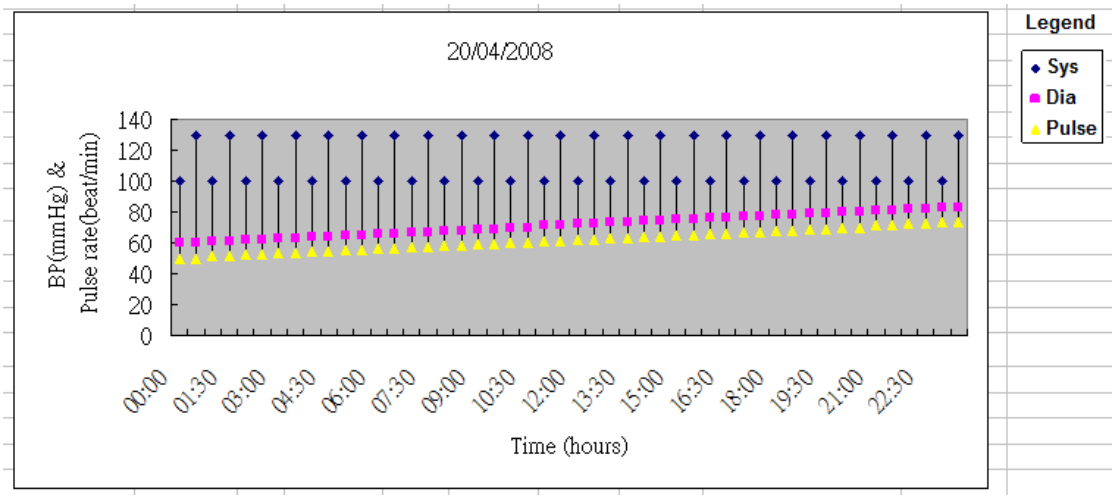

Fig 21

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Step 7: Press **<Show ambulatory graph>** button to show the first 24- hour ambulatory graph, seen as Fig- 22.

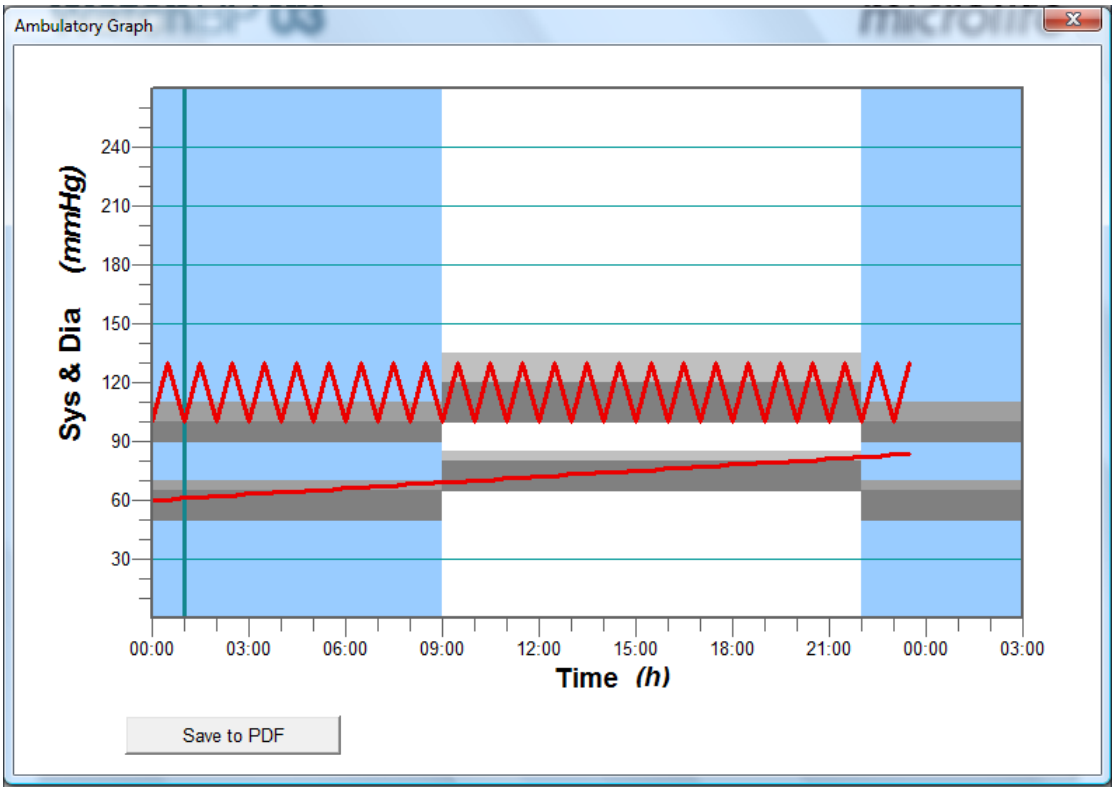

Fig 22

User can press **<Save to PDF>** button to save the first 24- hour data into PDF report. The PDF saved report shown as Fig- 23.

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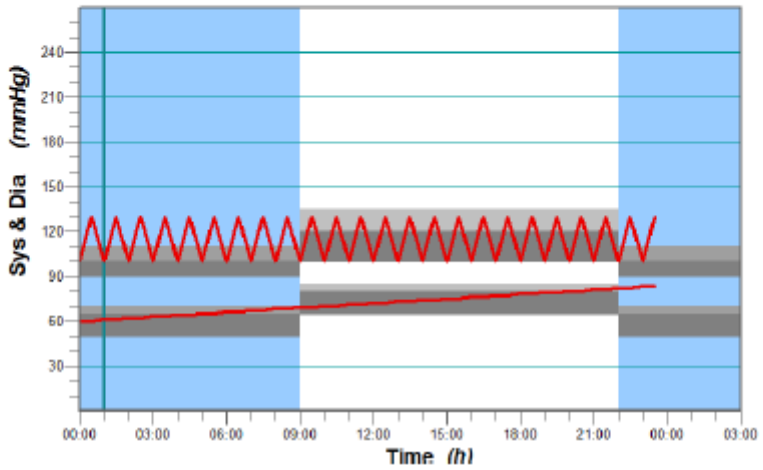
==========Ambulatory Blood Pressure Measurement==========

Patient ID : 4103
Patient Name : WatchBP
Patient Surname : O3

ABPM Actual Schedule
Awake period : 09 ~ 22 with 15 minutes interval
Asleep period : 22 ~ 09 with 20 minutes interval

Date : 20/04/2006



Average (Standard deviation)

Period	Sys	Dia	Pulse	MAP	PP
24-Hour	115 (1)	72 (7)	62 (7)	86	43
Awake	115 (1)	75 (4)	65 (4)	88	40
Asleep	115 (0)	67 (8)	57 (8)	83	48

Overall successful readings
96.5 %

24-hour SYS dip
0.0 %

24-hour DIA dip
10.7 %

Day readings>135/85 mmHg
0.0 %

Night readings>120/70 mmHg
18.2 %

White Coat Window

	Sys	Dia	Pulse
First hour max	130	60	50

Fig 23

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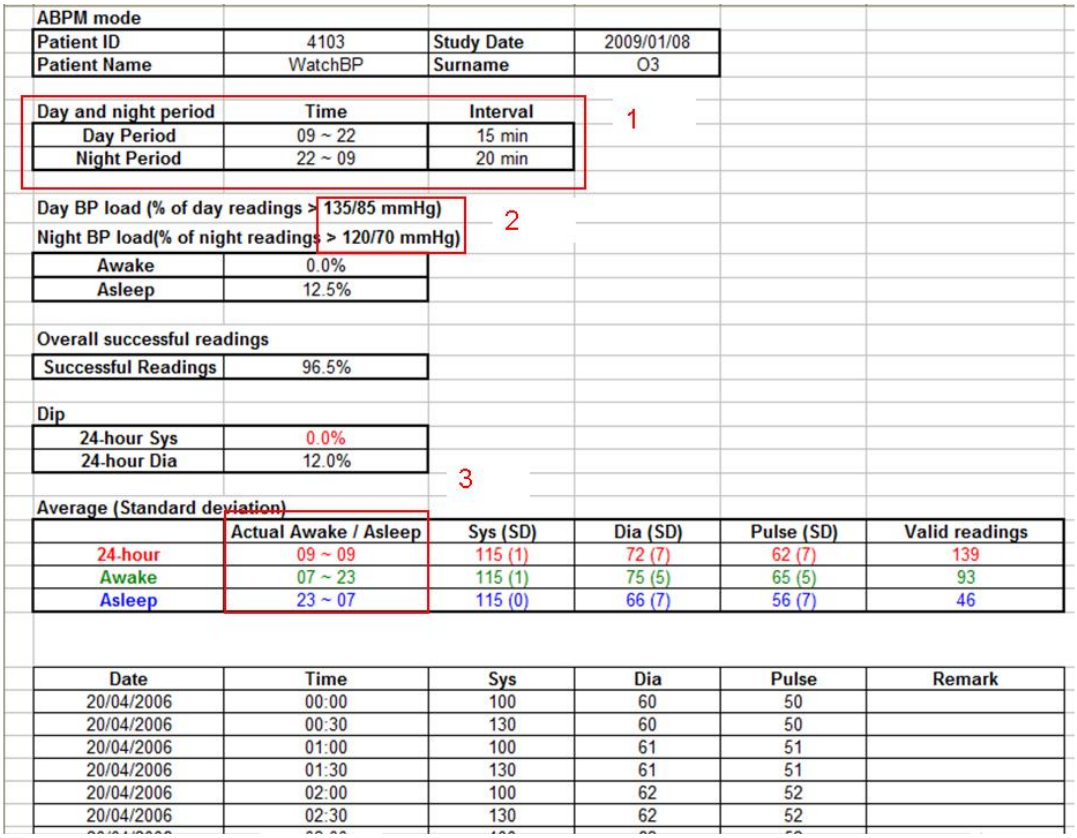
4 Excel and PDF Reports

Excel Report



ABPM mode

Patient ID	4103	Study Date	2009/01/08
Patient Name	WatchBP	Surname	O3

Day and night period	Time	Interval
Day Period	09 ~ 22	15 min
Night Period	22 ~ 09	20 min

1

Day BP load (% of day readings > 135/85 mmHg)
Night BP load(% of night readings > 120/70 mmHg)

2

Awake	0.0%
Asleep	12.5%

Overall successful readings

Successful Readings	96.5%

Dip

24-hour Sys	0.0%
24-hour Dia	12.0%

3

Average (Standard deviation)

	Actual Awake / Asleep	Sys (SD)	Dia (SD)	Pulse (SD)	Valid readings
24-hour	09 ~ 09	115 (1)	72 (7)	62 (7)	139
Awake	07 ~ 23	115 (1)	75 (5)	65 (5)	93
Asleep	23 ~ 07	115 (0)	66 (7)	56 (7)	46

Date	Time	Sys	Dia	Pulse	Remark
20/04/2006	00:00	100	60	50	
20/04/2006	00:30	130	60	50	
20/04/2006	01:00	100	61	51	
20/04/2006	01:30	130	61	51	
20/04/2006	02:00	100	62	52	
20/04/2006	02:30	130	62	52	

Fig 24

Section 1:

The ABPM schedule of O3 device displays at section1. If there is no configuration of the device, the field is blank. User could find corresponding fields at Analyzer O3 software shown as Fig 25.

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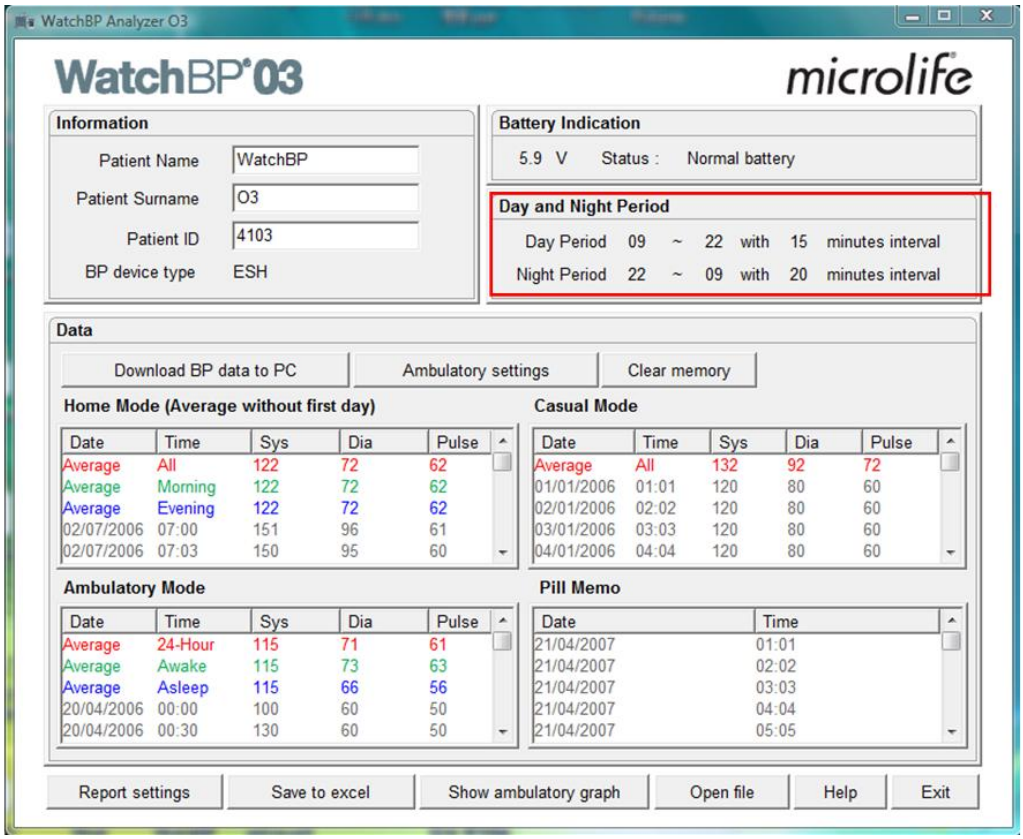

Fig 25

Section 2:

If user changes the **Blood Pressure Threshold** at **Report settings** dialog shown as Fig 26, the corresponding value of Excel report will be recalculated and the modified **Blood Pressure Threshold** will be changed at section 2.

Section 3:

If user inputs the actual awake/ asleep time at **Report settings** dialog shown as Fig 26, the actual awake/ asleep time of patient will be displayed at section 3.

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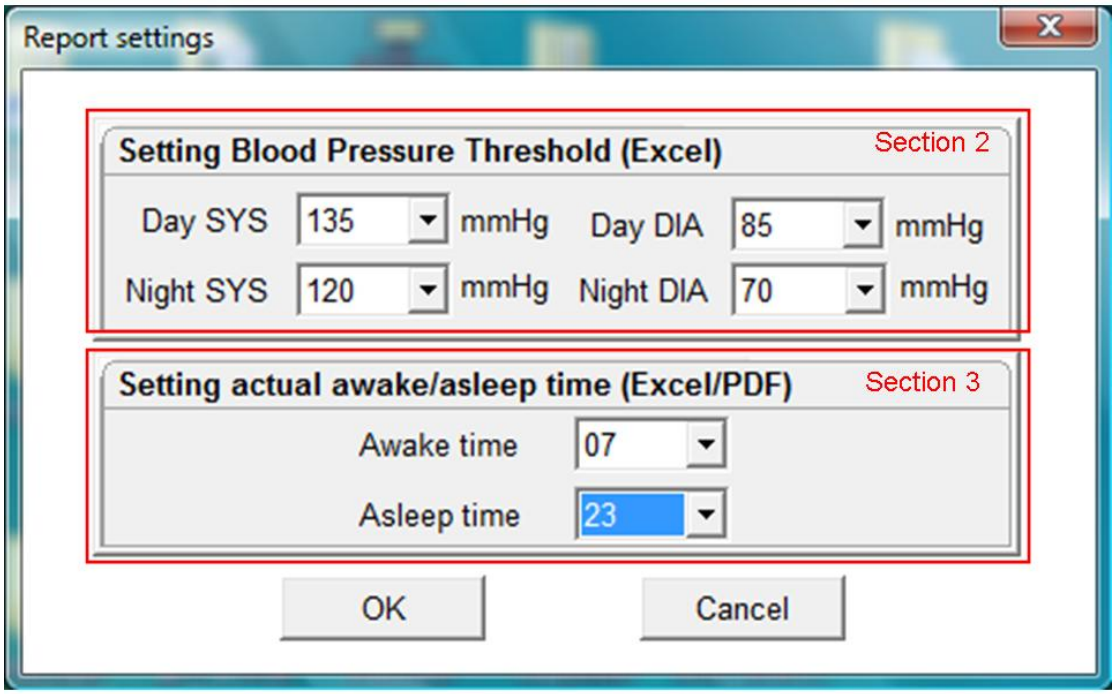

Fig 26

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PDF Report

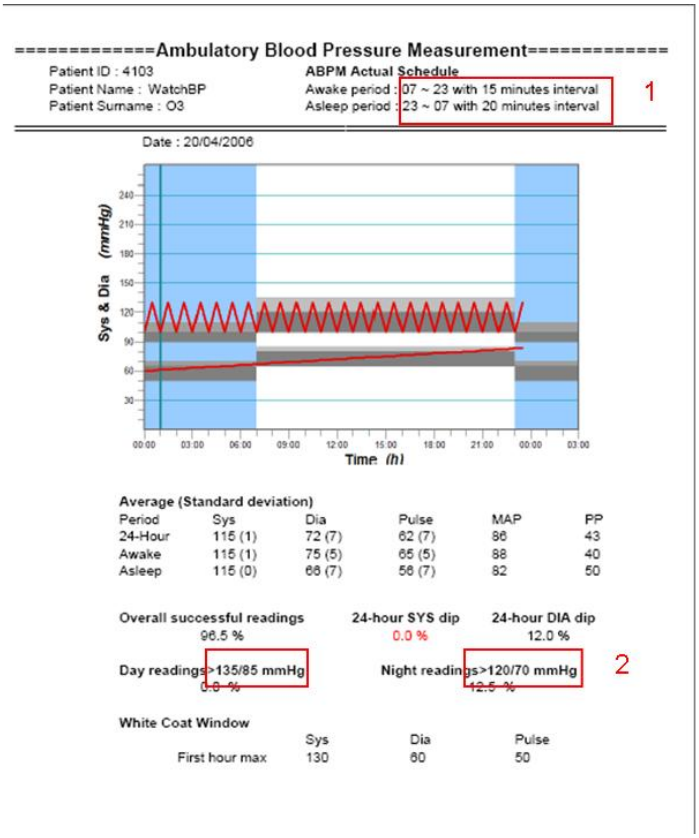
==========Ambulatory Blood Pressure Measurement==========
Patient ID : 4103
Patient Name : WatchBP
Patient Surname : O3
ABPM Actual Schedule
Awake period : 07 ~ 23 with 15 minutes interval
Asleep period : 23 ~ 07 with 20 minutes interval
1
Date : 20/04/2006
Sys & Dia (mmHg)
Time (h)
Average (Standard deviation)
Period Sys Dia Pulse MAP PP
24-Hour 115 (1) 72 (7) 62 (7) 86 43
Awake 115 (1) 75 (5) 65 (5) 88 40
Asleep 115 (0) 66 (7) 56 (7) 82 50
Overall successful readings 96.5 %
24-hour SYS dip 0.0 %
24-hour DIA dip 12.0 %
Day readings>135/85 mmHg
Night readings>120/70 mmHg
2
White Coat Window
Sys Dia Pulse
First hour max 130 60 50

Fig 27

Section 1:

If user inputs the actual awake/ asleep time at **Report settings** dialog shown as Fig 28, the actual awake/ asleep time of patient will be displayed at section 1. If the actual awake/ asleep time is not inputted, section 1 will display the original measurement schedule of the device.

Section 2:

If user changes the **Blood Pressure Threshold** at **Report settings** dialog shown as Fig 28, the corresponding value of PDF report will be recalculated and the modified **Blood Pressure Threshold** will be changed at section 2.

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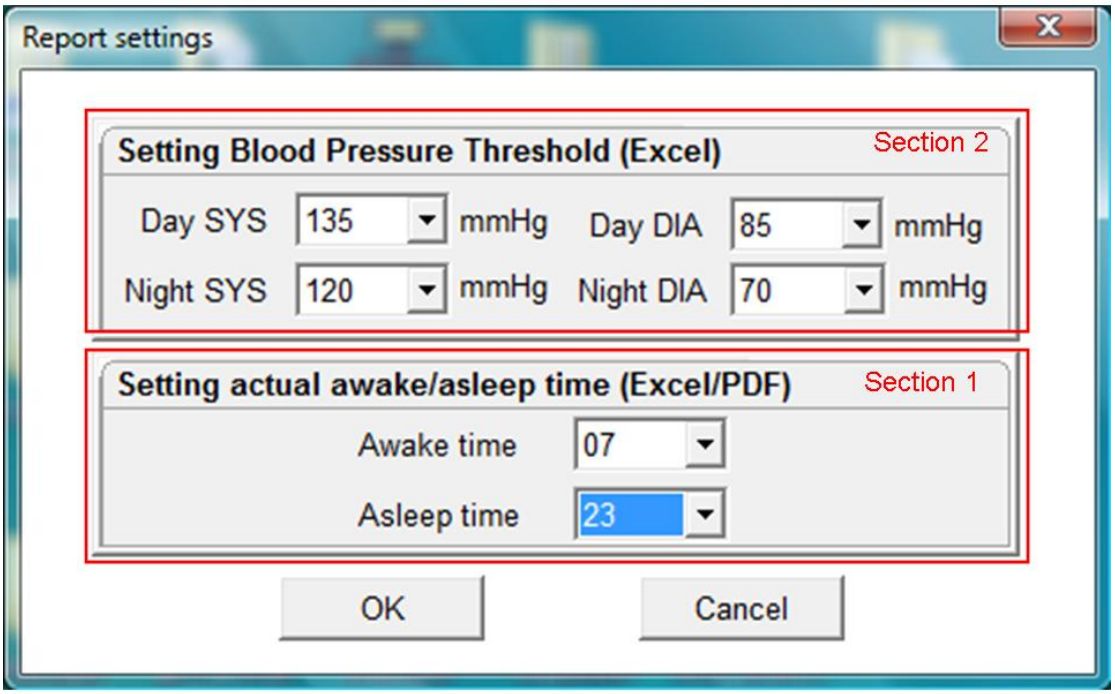

Fig 28

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